

Work Order ID 74689

Page 1

Wednesday, October 05, 2011 10:25:47 AM

Item ID: D206-642-541

Accept



Setup Start



Revision ID:

Stop



Item Name: Replacement Skidtube

Start Date: 10/5/2011 Start Qty: 1.00



Cust Item ID:

Required Date: 10/14/2011 Req'd Qty: 1.00



Customer:

Reference:

Run Start

Approvals: Process Plan: M.L.J Date: 11/10/05 Tooling: _____ Date: _____

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop



Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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Draw Nbr

Revision Nbr

D3274

D

IIN-D206-642

Rev M

100

0.00



DOCUMENT CONTROL

DC

0.00

Document Control

Memo

Photocopy bluefile & type labels per PPP D206-642-541 CHG003

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
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NOTE: Date & initial all entries

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QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

110

0.00



Skidtubes

Skidtubes

0.00

Skidtubes

Memo

****VERIFY AND INSPECT THE MATERIAL PRIOR TO USE****

1- Bend FWD end of tube using bend prog D3274 FWD and foil 10 as per dwg 12-01-13
D3274, cut fwd end of tube with saw table setup D3274.

2- remove fwd indexing ridge as per dwg D3274. Prepare for welding

3- weld fwd cap as per dwg D3274 and QSI004
AR Aluminum Rod Batch: m119742/m119785 } BB12-01-30

4- grind fwd cap weld on top surface only

5- Cut AFT end of tube at 170.9" as per dwg D3274 and deburr end.

6-Drill Aft cap pilot hole using DT8025

7 -Cleco DT8025 in position and install pilot hole drill Jig DT8742A,B,C,D.
Drill 3/16" pilot holes as per Dwg D32748 -Remove inner indexing ridge on aft end of skidtube as per Dwg D3274 scribe
batch #

9 -Open aft end cap holes to Ø0.208" as per Dwg D3274. Deburr aft end.

BB12/02/13

W/O:		WORK ORDER CHANGES					
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QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

114

QC5- Inspect part completeness to step on W/O

0.00



0.00 5/12/13

QC

Memo

Quality Control

116

QC10- Inspect visual per QSI004- ground welds

0.00



0.00 8/12/13

QC

Memo

Quality Control

120

Chemical Conversion Coat per QSI005 4.1

0.00



0.00 12-02-14

HandFinish

Memo

Hand Finishing

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

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Reference:

Run Start



Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Stop



QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
130 QC Quality Control	QC3- Inspect Part Finish QC1	0.00				BB 12/02/14			
	Memo	0.00				SAD			P10-
150 Skidtubes Skidtubes	Skidtubes	0.00							
	Memo	0.00							
	1-Open Ø0.313" and 0.375" crossbolt spacer holes as per Dwg D3274								
	2-Deburr crossbolt spacer holes as per Dwg D3274 and blow out chips from inside the tube								
	3-Bond web in place as per Dwg D3274 & QSI 015. A/R <input type="checkbox"/> Sikaflex-291 <input type="checkbox"/> Sikaflex expire date: <input type="checkbox"/> 12-08-13 <input type="checkbox"/> B 1119999 Start: <input type="checkbox"/> 12-02-14 Time: <input type="checkbox"/> 4:00 <input type="checkbox"/> Finish: <input type="checkbox"/> 12-02-15 Time: <input type="checkbox"/> 7:00 <input type="checkbox"/> (Adhere for 12 hours)								

BB 12/02/14

12-02-14

W/O: 746 89		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector
12-02-14	130	change Qc3 to Qc7	SPD AA				

Part No: P 206-642-54/ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
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Cust Item ID:

Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Run Start

Stop

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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160

QC5- Inspect part completeness to step on W/O

0.00



QC

Memo

0.00

Quality Control

DP 12-2-15

170

Skidtubes

0.00



Skidtubes

Memo

0.00

Skidtubes

1-Bend AFT end of tube using bend prog. D3274 AFT as per dwg D3274. Install drop pins in crossbolt spacer holes to maintain web position.

SAD 12-02-15

2- DRILL PILOT HOLES FOR WEARPLATES USING D3274-1T2
OPEN HOLES TO .297" . Debur3-DRILL TOE PIN HOLE .640" DIA AS PER DWG USING DT8935 FWD
END OF TUBE
DEBURR INSIDE OF HOLE AS NECESSARY (DO NOT ENLARGE HOLES)
REMOVE ANY FOREIGN OBJECTS INSIDE OF TUBES

4- Countersink crossbolt spacer holes as per Dwg D3274

5- prepare for welding

DL 12/02/16

W/O:		WORK ORDER CHANGES					
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Cust Item ID:

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Customer:

Reference:

Run Start



Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Stop



QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

180

QC5- Inspect part completeness to step on W/O

0.00

4.2°
2.9" S r2 l2 l2 l2 l2

②



QC

Memo

0.00

Quality Control

190

Skidtubes

0.00



Skidtubes

Memo

0.00

1-Insert D2649 & D3275-1 crossbolt spacers. Weld as per QSI 004 and Dwg D3274. Remember to back drill each hole before welding the other side. Use aluminum rod
A/R ☐ Aluminum Rod ☒ m119705

BE 12/2/16

3-Grind cross bolt welds flush as per Dwg D3274. SAD 12-02-17

4-Counterbore 5/16" x 0.750" deep as per Dwg D3274 and deburr.

DP 12-2-21

W/O:		WORK ORDER CHANGES					
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Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

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Customer:

Reference:

Run Start



Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Stop



QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

200

QC5- Inspect part completeness to step on W/O

0.00



QC

Memo

0.00

Quality Control

*Pl 12.02.21**1x* *12.20.21* *12.20.21* *1*

210

QC10- Inspect visual per QSI004- ground welds

0.00



QC

Memo

0.00

Quality Control

*Pl 12.02.21**1x* *12.02.21*

220

Pressure Wash per QSI005 4.3

0.00



HandFinish

Memo

0.00

Hand Finishing

Re-alodine tube as per QSI 005 section 4.1.2.1 do not acid etch

1 *OPM* *Feb 22/2012*

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Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

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QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Run Start

Stop

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Tool ID

Tool #

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

230

White Gloss(Ref:4.3.5.1) per QSI005 4.3-Alum

0.00



Powdercoat

Powder Coating

Memo

START TIME: 11:00

OVEN TEMPERATURE: 3200F

FINISH TIME: 11:30

0.00

1X M/L 12/02/22

240

QC3- Inspect Part Finish

0.00



QC

Quality Control

Memo

0.00

1 of 12/02/22

250

HandFinishing

0.00



HandFinish

Hand Finishing

Memo

0.00

1-Install Nut Plate as per Dwg D3274. Apply LPS-3 to Nut Plate and rivets.

A/R ☐ LPS-3 ☐ 11/14/96

2-Install inserts as per Dwg D3274. Use a drop of Sikaflex inside insert holes a

A/R ☐ Sikaflex-291 ☐ 11/14/96

Sikaflex expire date: ☐ 12/02

1 of 12/02/22

M 119480

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

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Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

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Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

260

✓ QC5- Inspect part completeness to step on W/O

0.00



QC

Memo

0.00

Quality Control

✓ Inspect Nut Plate & Inserts

1 BL 122.23

270

HAND FINISHING RESOURCE #1

0.00



HandFinish

Memo

0.00

Hand Finishing

✓ 1-Install wearpads & gaskets as per Dwg D3274.

2-Install ring as per Dwg D3274

✓ A/R ☐ Sikaflex-291 ☐ 1119508

Sikaflex expire date: ☐ 12108

✓ 3-Inspect for foreign objects as per QSI 024

4-Spray inside of tube on both sides of web with LPS-3

✓ A/R LPS-3 Batch: 1014

5-Install Aft Cap and seal with Sikaflex. Clean excess adhesive.

✓ A/R ☐ Sikaflex-291 ☐ 1119508

Sikaflex expire date: ☐ 12109

1 0 11 12/02/13

W/O:		WORK ORDER CHANGES					
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--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

280

QC5- Inspect part completeness to step on W/O

0.00



QC

Memo

0.00

Quality Control

m 12-02-24 ①

290

Identify as per dwg & Stock Location: _____

0.00



Packaging

Memo

0.00

Packaging

PP 73680 (1x) SP 12-02-24

300

QC21- Final Inspection - Work Order Release

0.00



QC

Memo

0.00

Quality Control

MLJ 12/02/24

PP 12-02-24 ①

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Wednesday, October 05, 2011 10:25:52 AM

Required Qty: 1.00

D3282-041	Manufactured	No	150	Each	1.0000	1	
	B 74294					1	① 12-02-14
Float Web (206L/407)							

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
LG	1	
70050	1	

W/O:		WORK ORDER CHANGES					
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Picklist Print

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Parent Item: D206-642-541

Parent Item Name: Replacement Skidtube

Start Date: 10/5/2011

Required Date: 10/14/2011

Start Qty: 1.00

Required Qty: 1.00

D2649 Manufactured No 190 Each 1,650.000 12 12



Cross Bolt Spacer



BE 12/02/10
B 78019 x12

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
LG	736	
68224	2	
71355	2	
72704	2	
72841	130	
73855	600	
LG001	914	
65317	1	
68507	11	
73390	23	
73857	279	
73860	600	

D3275-1 Manufactured No 190 Each 272.0000 12 12



Crossbolt Spacer



BE 12/02/10

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
LG	12	
72123	12	
LG002	260	
66930	106	
73393	154	

12

W/O:		WORK ORDER CHANGES					
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Start Date: 10/5/2011

Required Date: 10/14/2011

Start Qty: 1.00

Required Qty: 1.00

CR3212-4-03

Purchased

No

250

Each

2,074.000

2



Cherry Rivet



2
12/02/23

Location

Loc Qty

Loc Code

FP-B

2

110139

2

ST311

1072

114859

1072

ST318

1000

119017

1000

x2

D3415-041

Manufactured

No

250

Each

37.0000

1



Nut Plate



1
12/02/27

Location

Loc Qty

Loc Code

ST053

37

67605

37

x1

CCR264SS3-3

Purchased

No

250

Each

1,347.000

2



Cherry Rivet



2
12/02/23

Location

Loc Qty

Loc Code

FP-B

2

113973

2

ST311

345

117849

345

ST317

1000

119017

1000

x2

W/O:		WORK ORDER CHANGES					
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Parent Item Name: Replacement Skidtube

Start Date: 10/5/2011

Required Date: 10/14/2011

Start Qty: 1.00

Required Qty: 1.00

ALS4-1032-130

Purchased

No

250

Each

2,330.000

78

78



Insert



1120410 (x78) JU 12/02/23

Location

Loc Qty

Loc Code

ST280

2000

119084

2000

ST281

288

118386

288

ST282

42

117717

8

118237

32

118312

2

D3536-15

Manufactured

No

270

Each

35.0000

1

1



Gasket



B73318(x1) JU 12/02/23

Location

Loc Qty

Loc Code

FP002

26

73318

26

FP011

9

71586

9

D3536-23

Manufactured

No

270

Each

31.0000

1

1



Gasket



B73312(v1) JU 12/02/23

Location

Loc Qty

Loc Code

FP002

26

73312

26

FP011

5

43406

1

71579

4

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

Wednesday, October 05, 2011 10:25:53 AM

Work Order ID: 74689

Parent Item: D206-642-541

Parent Item Name: Replacement Skidtube

Start Date: 10/5/2011

Required Date: 10/14/2011

Start Qty: 1.00

Required Qty: 1.00

D3536-35

Manufactured No

270

Each

30.0000

1

1



Gasket



B74511 (x1) JH 12/02/23

Location

Loc Qty

Loc Code

FP002

21

73313

21

FP012

9

72882

9

D3536-39

Manufactured No

270

Each

33.0000

1

1



Gasket



B73313 (x1) JH 12/02/23

Location

Loc Qty

Loc Code

FP002

26

73317

26

FP015

7

69760

7

D3535-15

Manufactured No

270

Each

21.0000

1

1



Wearshoe



JH 12/02/23

Location

Loc Qty

Loc Code

FP007

21

73006

8

73315

13

D3535-35

Manufactured No

270

Each

23.0000

1

1



Wearshoe



B74509 (x1) JH 12/02/23

Location

Loc Qty

Loc Code

FP018

23

67598

1

70815

1

73311

21

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

Page 6

Wednesday, October 05, 2011 10:25:53 AM

Work Order ID: 74689

Parent Item: D206-642-541

Parent Item Name: Replacement Skidtube

Start Date: 10/5/2011

Required Date: 10/14/2011

Start Qty: 1.00

Required Qty: 1.00

D3535-39

Manufactured No

270

Each

26.0000

1

1



Wearshoe



12/02/27

Location

Loc Qty

Loc Code

FP018

26

69759

1

72159

5

73316

20

D3535-23

Manufactured No

270

Each

31.0000

1

1



Wearshoe



12/02/23

Location

Loc Qty

Loc Code

FP021

31

71581

5

73314

26

D3537-3

Manufactured No

270

Each

26.0000

1

1



Wearpad



B74500(x1) 12/02/23

Location

Loc Qty

Loc Code

FP

3

70481

3

FP002

14

73305

14

FP017

9

35697

1

72144

8

Wednesday, October 05, 2011 10:25:53 AM

Shop Packet Print

Page 6

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

Page 7

Wednesday, October 05, 2011 10:25:53 AM

Work Order ID: 74689

Parent Item: D206-642-541

Parent Item Name: Replacement Skidtube

Start Date: 10/5/2011

Required Date: 10/14/2011

Start Qty: 1.00

Required Qty: 1.00

D3537-1 Manufactured No

270 Each

75.0000 9 9



Wearpad



B378592(x9) Jd 12/02/23

Location

Loc Qty

Loc Code

FP001

68

73394

12

73395

56

FP017

7

69817

5

70686

2

AN960C10L ☒ NAS1149C0332 Purchased No

270 Each

0.0000 80 80



washer



M120648(x80) Jd 12/02/23

AN960C416 ☒ NAS1149C0463 Purchased No

270 Each

0.0000 1 1



washer



11117735(vi) Jd 12/02/23

D3672-1 Manufactured No

270 Each

880.0000 2 2



Phenolic Washer



Jd 12/02/23

Location

Loc Qty

Loc Code

ST074

878

64177

58

66821

460

72229

360

ST077

2

52505

2

x2

Wednesday, October 05, 2011 10:25:53 AM

Shop Packet Print

Page 7

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

Wednesday, October 05, 2011 10:25:53 AM

Work Order ID: 74689

Parent Item: D206-642-541

Parent Item Name: Replacement Skidtube

Start Date: 10/5/2011

Required Date: 10/14/2011

Start Qty: 1.00

Required Qty: 1.00

AN3C4A Purchased No 270 Each 2,147.000 80 80



BOLT



M120423 (x80) JH n10d23

Location	Loc Qty	Loc Code
ST350	2147	
117313	2	
117688	5	
117872	22	
118112	16	
118451	602	
118706	500	
118838	1000	

AN4C5A Purchased No 270 Each 554.0000 1 1



BOLT



JH n10z123

Location	Loc Qty	Loc Code
FP-B	75	
112243	75	
ST345	379	
112243	379	
ST356	100	
119017	100	

X1

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

Page 9

Wednesday, October 05, 2011 10:25:53 AM

Work Order ID: 74689

Parent Item: D206-642-541

Parent Item Name: Replacement Skidtube

Start Date: 10/5/2011

Required Date: 10/14/2011

Start Qty: 1.00

Required Qty: 1.00

D2646

Manufactured No

270

Each

73.0000

1

1



Aft Cap



B73825(x1) JU 12/02/23

Location

Loc Qty

Loc Code

FP004

39

68280

39

FP006

5

62678

5

FP-4

25

70945

1

71070

24

fp5

4

71038

4

D3413-1

Manufactured No

270

Each

30.0000

1

1



Ring



B77940(x1) JU 12/02/23

Location

Loc Qty

Loc Code

ST420

2

66387

1

70773

1

ST467

28

72137

8

73298

20

Wednesday, October 05, 2011 10:25:53 AM

Shop Packet Print

Page 9

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

DART

RELEASED

07.02.12

DEO ATTACHED

DESIGN CP	DRAWN BY PH	DART AEROSPACE USA, INC. PORT HADLOCK, WA	
CHECKED #	APPROVED #	DRAWING NO. D3274	REV. D SHEET 1 OF 4
DATE 06.12.19		TITLE SKIDTUBE ASSEMBLY SCALE NTS	
A	04.03.15	NEW ISSUE	
B	04.08.09	MOVE SADDLE HOLE: 42.14 WAS 42.76	
C	05.03.16	ADD -043; NEW INSERTS	
D	06.12.19	NEW INSERTS, SS WEARSHOE + GASKET	

Qty -041	Qty -043	Part Number	Description
X		D3274-041	SKIDTUBE ASSEMBLY
	X	D3274-043	SKIDTUBE ASSEMBLY
1	1	D2600-1-240	EXTRUSION
1	1	D2646	AFT CAP
12	12	D2649	CROSS BOLT SPACER
12	37	D3275-1	CROSS BOLT SPACER
1	1	D3282-041	FLOAT WEB
1	1	D3285-1	CAP
1	1	D3413-1	RING
1	1	D3415-041	NUT PLATE
1	1	D3535-15	WEARSHOE
1	1	D3535-23	WEARSHOE
1	1	D3535-35	WEARSHOE
1	1	D3535-39	WEARSHOE
1	1	D3536-15	GASKET
1	1	D3536-23	GASKET
1	1	D3536-35	GASKET
1	1	D3536-39	GASKET
9	9	D3537-1	WEARPAD
1	1	D3537-3	WEARPAD
78	78	ALS7-1032-130	INSERT (or AKS4-1032-130, ALS4-1032-130, AELS-1032-130)
80	80	AN3C4A	BOLT
1	1	AN4C5A	BOLT
1	1	AN960C416	WASHER
80	80	AN960C10L	WASHER
2	2	CCR264SS3-3	RIVET
2	2	CR3212-4-03	RIVET
2	2	NAS1515H3L	WASHER

GENERAL NOTES:

1. TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED.
2. DAMAGE TOLERANCE ON FWD BEND:
THERE SHOULD BE NO VISIBLE WRINKLES IN THE BEND FROM THE GROUND TO A HEIGHT OF 7 INCHES ABOVE THE GROUND. IT IS ACCEPTABLE TO POLISH OUT GOUGES UP TO 0.020 DEEP IN THE BENT PORTION OF THE TUBE. A MAXIMUM REDUCTION IN DIAMETER OF 0.150" IS ACCEPTABLE IN THE BENT PORTION OF THE TUBE.
3. ALL HOLES DRILLED ON CENTERLINES.
4. BOND D3282-041 FLOAT WEB INTO D3274-1/-3 OUTER TUBE WITH NON-STRUCTURAL SIKAFLEX-241/291 ADHESIVE PER DART QSI 015. ENSURE HOLES LINE-UP.
5. WELDING TO BE DONE PER DART QSI 004.
6. FINISH: - ACID ETCH, ALODINE ASSEMBLY PER DART QSI 005 4.1
- POWDER COAT WHITE (REF. 4.3.5.1) PER DART QSI 005 4.3
7. DRILL Ø0.297 HOLES FOR ALS7-1032-130 INSERTS USING DT3274-1T2 BEFORE FINISH. INSTALL ALS7-1032-130 INSERTS AFTER FINISH. SEAL WEARSHOE BOLTS WITH SIKAFLEX -241/-291.
8. SPRAY INSIDE OF TUBE WITH A COAT OF LPS LABORATORIES "LPS-3" AFTER FINISH AND INSTALLATION OF INSERTS. COAT ALL EXPOSED FASTENERS WITH LPS LABORATORIES "LPS PROCYON" AFTER FINAL ASSEMBLY, CLEAN EXCESS OFF POWDER COATING WITH MEK DEGREASER.

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UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
34689 M.C.5 11/10/05

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

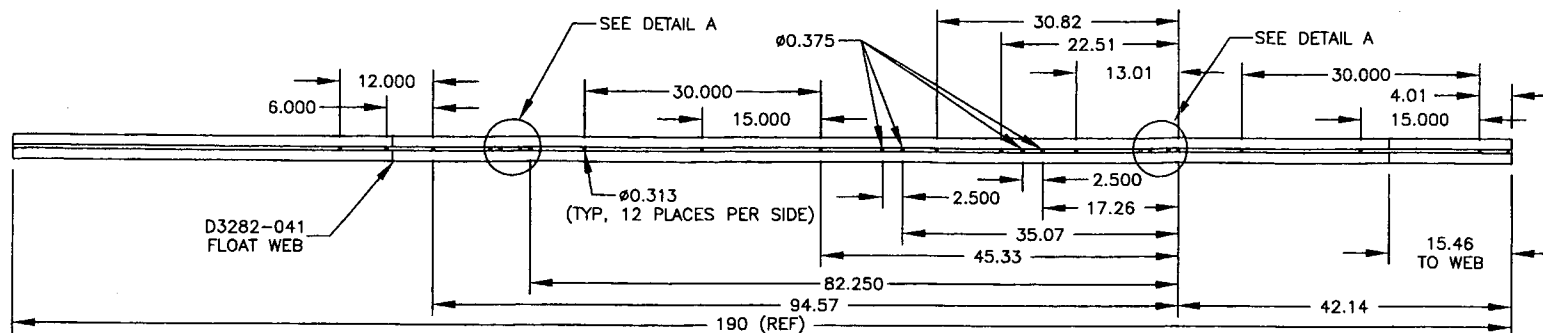
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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

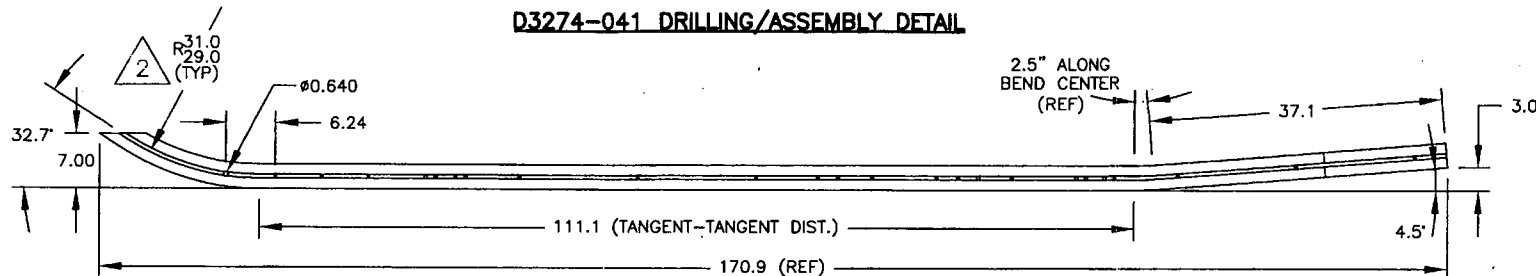
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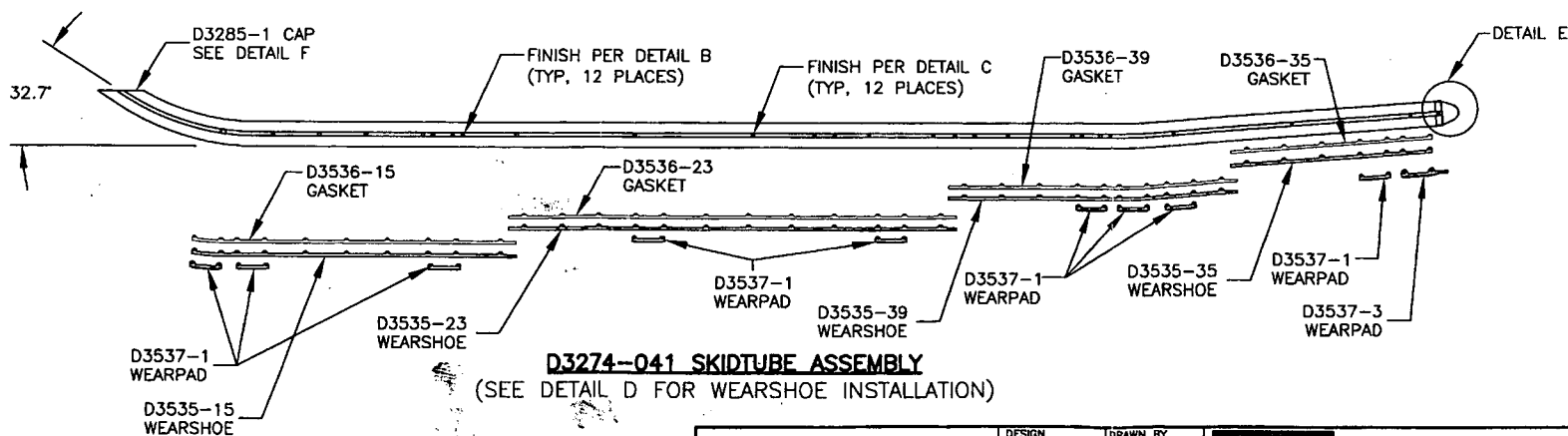
74689



D3274-041 DRILLING/ASSEMBLY DETAIL



D3274-041 BEND/DRILLING DETAIL



D3274-041 SKIDTUBE ASSEMBLY

(SEE DETAIL D FOR WEARSHOE INSTALLATION)

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07.02.12

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DESIGN	CP	DRAWN BY	PH	DART	DART AEROSPACE USA, INC.
CHECKED	#	APPROVED	#	DRAWING NO.	D3274
DATE	06.12.19	TITLE	SKIDTUBE ASSEMBLY	REV. D	SHEET 2 OF 4
				SCALE	1:15

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

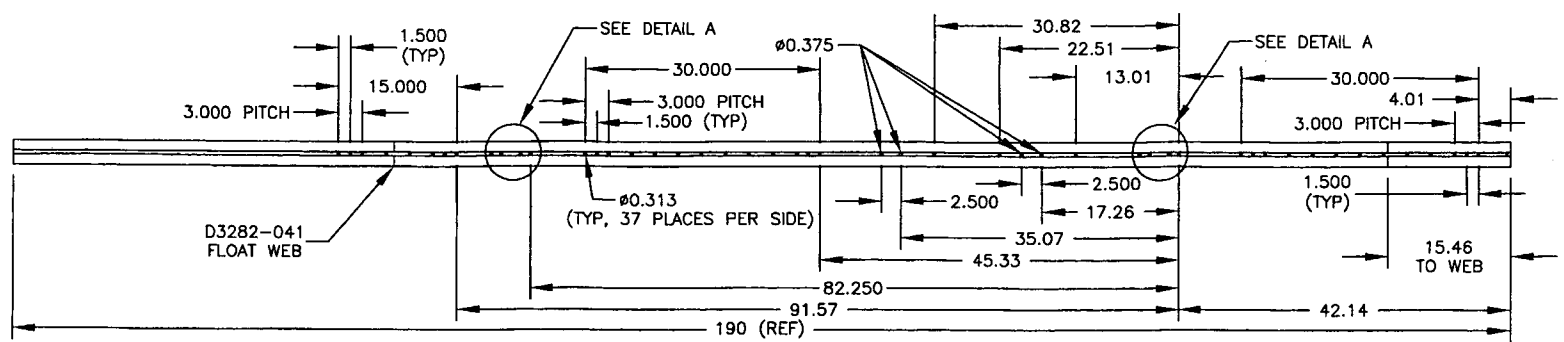
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NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

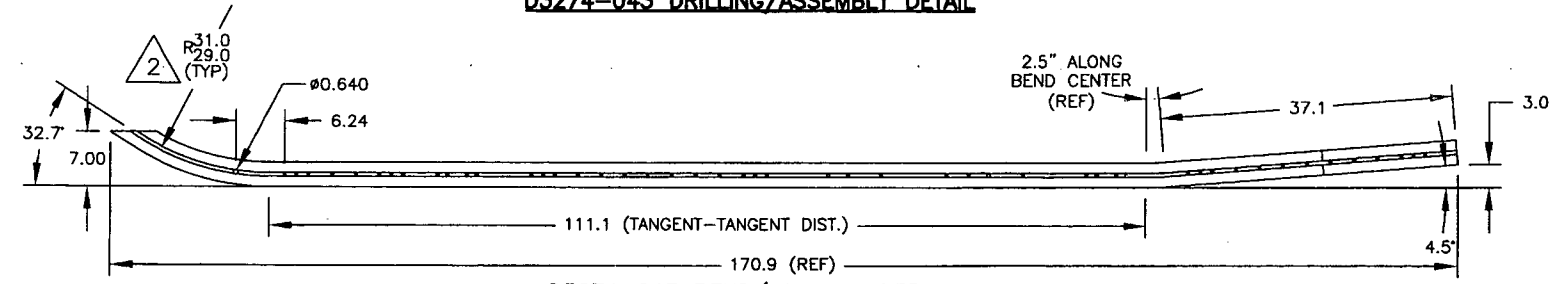
NOTE: Date & initial all entries

74689

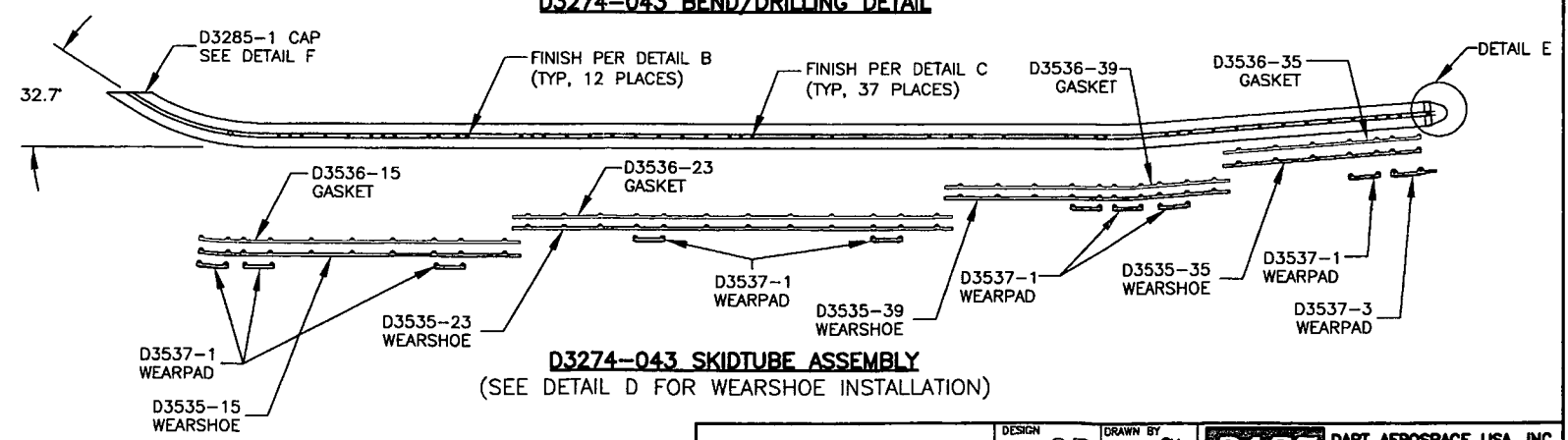
DEO ATTACHED



D3274-043 DRILLING/ASSEMBLY DETAIL



D3274-043 BEND/DRILLING DETAIL



D3274-043 SKIDTUBE ASSEMBLY
(SEE DETAIL D FOR WEARSHOE INSTALLATION)

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07.02.12

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		#	#	D3274	SHEET 3 OF 4
		DATE		TITLE	SCALE
		06.12.19		SKIDTUBE ASSEMBLY	1:15

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

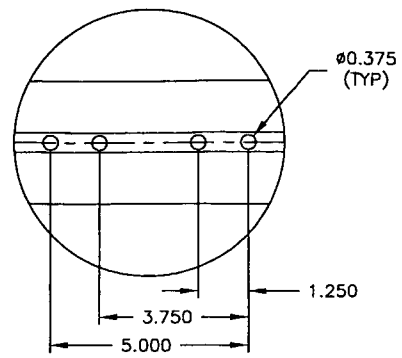
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NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

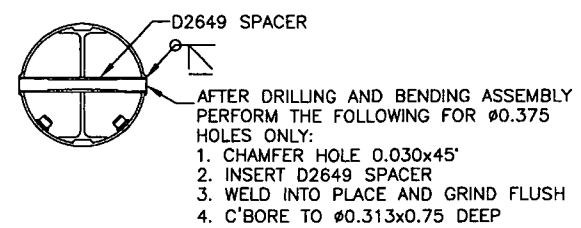
NOTE: Date & initial all entries

74689

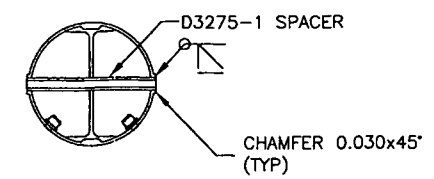
DETAIL A: DRILL DETAIL



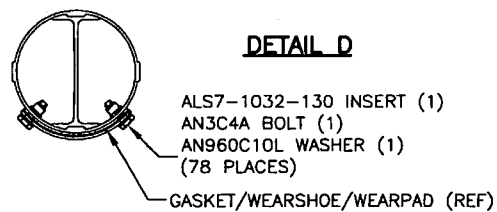
DETAIL B FOR 0.375 HOLES ONLY



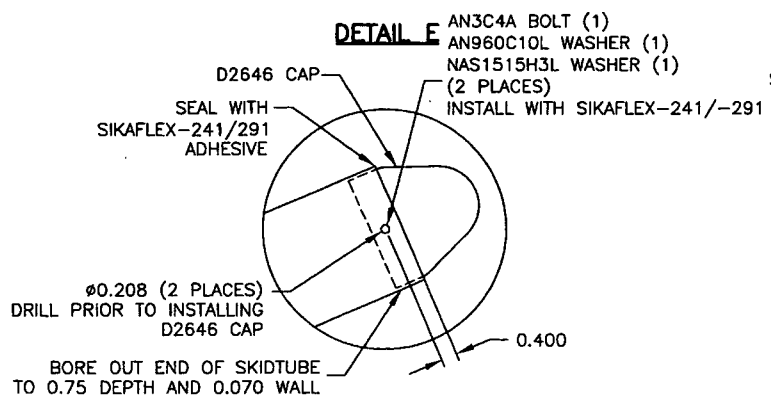
DETAIL C FOR 0.313 HOLES ONLY



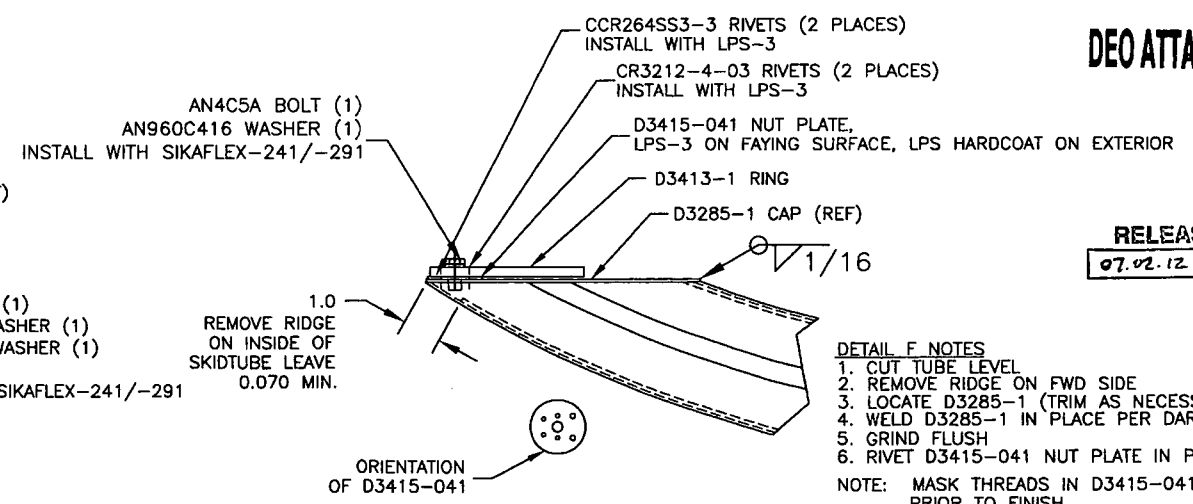
DETAIL D




DETAIL E



DETAIL F: END FINISHING DETAIL



DETAIL F NOTES
 1. CUT TUBE LEVEL
 2. REMOVE RIDGE ON FWD SIDE
 3. LOCATE D3285-1 (TRIM AS NECESSARY)
 4. WELD D3285-1 IN PLACE PER DART QSI 004
 5. GRIND FLUSH
 6. RIVET D3415-041 NUT PLATE IN PLACE
 NOTE: MASK THREADS IN D3415-041 PRIOR TO FINISH

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		DATE	06.12.19	DRAWING NO.	D3274	SCALE	
		TITLE				1:3	
		SKIDTUBE ASSEMBLY					

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

746 89

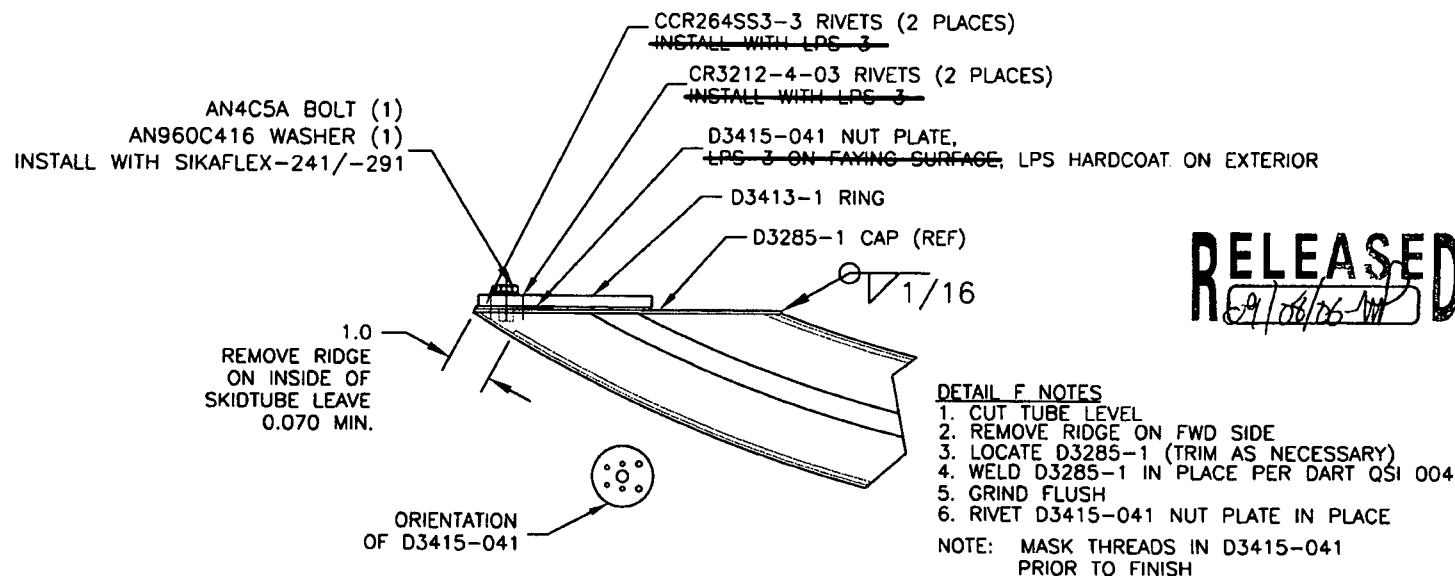
DRAWING NO. D3274	TITLE SKIDTUBE ASSEMBLY	REV. D	DART AEROSPACE USA, INC ENGINEERING ORDER		D.E.O. NO. D3274-D-1	SHEET NO. SHEET 1 OF 1	SCALE NTS
DRAWN <i>UP</i>	CHECKED <i>L</i>	MFG. APPR. <i>A</i>	APPROVED <i>WAP</i>		DE APPR. <i>#</i>		
DATE 09.06.17	DATE 09.06.23	DATE 09/06/23	DATE 09/06/23		DATE 09.06.23		

LPS-3 IS NO LONGER USED DURING ASSEMBLY OF SKIDTUBE.

AMEND NOTE 8: "~~SPRAY INSIDE OF TUBE WITH A COAT OF LPS LABORATORIES 'LPS 3' AFTER FINISH AND INSTALLATION OF INSERTS.~~
COAT ALL EXPOSED FASTENERS WITH LPS LABORATORIES 'LPS PROCYON' AFTER FINAL ASSEMBLY, CLEAN EXCESS OFF
POWDER COATING WITH MEK DEGREASER."

AMEND DETAIL F AS SHOWN:

DETAIL F: END FINISHING DETAIL



DETAIL F NOTES

1. CUT TUBE LEVEL
2. REMOVE RIDGE ON FWD SIDE
3. LOCATE D3285-1 (TRIM AS NECESSARY)
4. WELD D3285-1 IN PLACE PER DART QSI 004
5. GRIND FLUSH
6. RIVET D3415-041 NUT PLATE IN PLACE

NOTE: MASK THREADS IN D3415-041
PRIOR TO FINISH

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries